

I/we claim:

1. A clamping spring for a microdisplay, comprising a sheet of resilient material having an interconnected plurality of alternating first and second tabs disposed around the periphery thereof, the first tabs being angled upwardly and having mounting slots therein, the second tabs being angled downwardly; whereby force applied to said first tabs provides a consistent controlled clamping force at said second tabs.

2. The clamping spring of claim 1 wherein the first and second tabs are interconnected by a generally rectangular body having an opening therethrough.

3. The clamping spring of claim 1 wherein the resilient material is steel.

4. The clamping spring of claim 1 wherein there are two first tabs and two second tabs.

5. A clamping arrangement for a microdisplay, comprising:

a clamping spring, having a sheet of resilient material with an interconnected plurality of alternating first and second tabs disposed around the periphery thereof, the first tabs being angled upwardly and having mounting slots therein, the second tabs being angled downwardly; whereby force applied to said first tabs provides a consistent controlled clamping force at said second tabs;

a digital micromirror device (DMD) assembly, secured by a plurality of first shoulder bolts having apertures extending along axes of the bolts;

an optical housing having a plurality of bosses supporting the digital micromirror device (DMD) assembly with threaded apertures therein; and

second shoulder bolts disposed through the slots of the clamping spring and the apertures of at least a portion of the first shoulder bolts and engaging the threaded apertures of at least a portion of the bosses.

6. The clamping arrangement of claim 5 wherein the first and second tabs are interconnected by a generally rectangular body having an opening therethrough.

7. The clamping arrangement of claim 5 wherein the resilient material is steel.

8. The clamping arrangement of claim 5 wherein there are two first tabs and two second
5 tabs.

9. The clamping arrangement of claim 5 wherein the digital micromirror device (DMD) assembly includes a digital micromirror device (DMD) chip mounted in an interposer and electrically connected to a printed circuit board, the interposer and the printed circuit board being sandwiched between a backer plate and an interposer clamp, and the interposer being
10 aligned with the printed circuit board and the interposer clamp by pins.

10. The clamping arrangement of claim 9 wherein the digital micromirror device (DMD) assembly also includes coil springs disposed on the first shoulder bolts to bias the digital micromirror device (DMD) assembly together.

11. A projection system, comprising:

15 an optics housing having a plurality of bosses with threaded apertures therein;

a digital micromirror device (DMD) assembly clamped together with a plurality of first shoulder bolts with longitudinal opening therethrough;

a clamping spring for biasing the digital micromirror device (DMD) assembly against the optics housing; and

20 two or more second shoulder bolts, engaging said clamping spring, extending through said opening in selected ones of said first shoulder bolts, and engaging said threaded apertures in said optics housing.

12. The projection system of claim 11 wherein the digital micromirror device (DMD) assembly is biased against the optics housing by a clamping spring having a sheet of resilient
25 material with an interconnected plurality of alternating first and second tabs disposed around

the periphery thereof, the first tabs being angled upwardly and having mounting slots therein, the second tabs being angled downwardly; whereby force applied to said first tabs provides a consistent controlled clamping force at said second tabs.

13. The projection system of claim 11 wherein the digital micromirror device (DMD)

5 assembly is biased against the optics housing by a plurality of coil springs disposed on at least a portion of the second shoulder bolts.